

Modern Concepts of Cardiovascular Disease

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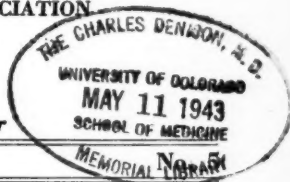
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CONVALESCENT CARE IN RHEUMATIC FEVER

At the outset it should be stated that convalescent care in rheumatic fever and its serious sequela, rheumatic heart disease, is not predictable as to time, nor can the benefits of convalescent care be always evaluated. This is predicated on the chronicity of the disease and its tendency to recurrence. However, many studies have been made which can guide us and suggest measures which can be taken to institute proper care of children and young adults afflicted with the disease. The early, prompt and prolonged care of the individual following the initial infection should be stressed.

It has been aptly said that convalescence is the "unfinished business" of medicine. This is particularly applicable to such a disease as rheumatic fever which, because of its polymorphic character, is so unpredictable in its course. Just where the active phase ends and convalescence begins it is often impossible to say, and the available clinical laboratory tests may give us little help. The wisest of clinicians may pronounce a rheumatic patient in the inactive phase of his disease, while the pathologist in his protocol states otherwise, and reports the finding of active pathologic processes, such as the Aschoff body, present. Breed of Boston, in speaking of rheumatic fever, states it well when he says, "We do not know when it starts, we often cannot recognize it when it is here, we have no cure for it, and we cannot tell when it is gone." Such is the capricious nature of a disease which is so devastating in its sequelae and which furnishes such high morbidity and mortality figures for the country as a whole.

Rheumatic fever is essentially a disease of childhood which has its beginning at about 6 or 7 years of age in the great majority of instances. Death is not common in the initial attack, but it is characteristic of the disease that it tends to recur and that these recurrences tend to diminish as puberty approaches. The polycyclic types are more common than the monocyclic types, and with each reactivation the heart becomes more and more damaged. The first five years following the initial infection are the critical ones, and it is therefore important that wise and proper treatment be instituted. Many studies have shown that, of the deaths, as high as two-thirds have occurred within the first five years of the initial rheumatic infection. In a twenty-one year follow-up and study of 1,438 children receiving convalescent care, whom I have had the privilege to see, there are 992 now living, giving a mortality percentage of 31%. Of the 446 deaths, 42% occurred within five years of the initial infection. Most of these were the polycyclic types of rheumatic re-in-

fection. 87% of the deaths occurred before 20 years of age. These figures would indicate that accurate diagnosis and early and prolonged treatment is so important and necessary if this most serious disease is ever to be brought under control. Accurate and early diagnosis must rest upon the ability of the physician to recognize rheumatic fever in its incipient stages and to be mindful of its polymorphism. For example, there is a common belief that rheumatism and poly-arthritis are synonymous. But this is not so, for it is well known that the younger the child, the less apt are the joints to be involved. The differential diagnosis of so-called "growing pains" is all important, and the recognition and knowledge that these may be rheumatic or may be non-rheumatic. Every physician has had this diagnostic problem to solve. It is not an easy one.

When the diagnosis is made or, at least, suspected, prompt treatment must be instituted. This usually means bed care in a hospital for the acute stage of the disease. Following this a long period of convalescent care is often necessary. This means, in many cases, not days or weeks, but often months and years. There is, then, a close analogy to the treatment of tuberculosis, in that long term sanatorial care is required for the sub-acute cases. There is no reason why a patient with rheumatic fever and rheumatic heart disease should not have as prolonged bed-rest as a patient with tuberculosis. Consider what bed-rest does for a child, for example, suffering from rheumatic heart disease, who has a tachycardia of 110 beats per minute. If the heart can be slowed only 10 beats per minute by bed-rest, this means that in 24 hours it contracts nearly 15,000 less times. This, in itself, is a conserving process in a vital organ, which is so seriously affected by the rheumatic infection. Convalescent care, then, in a strict sense, should really be thought of in terms of sanatorial care, and should be continued, as in tuberculosis, until the active rheumatic process has become quiescent.

This sanatorial type of care for the rheumatic patient has become the concern of Government and already 18 states have set up State programs to provide such care. There will, no doubt, be an expansion of these State programs as the need arises, particularly in those States where the incidence of rheumatic fever and rheumatic heart disease is high, as it is in the Middle Atlantic States and in the Rocky Mountain States.

Optimal results in the care of children afflicted with rheumatism would be best attained by early

diagnosis with prompt bed care in the acute hospital or the home and continuing care in the convalescent home or foster home or the child's own home, during the sub-acute and chronic stage. Continuity of care is stressed and close observation of the child during the first five years following the first infection. Each bout of rheumatic fever adds more injury to a heart already damaged. It is therefore important that the frontal attack be made during these five critical years. Following puberty, the incidence of rheumatic fever decreases, and the danger of recurrences becomes less.

Where a "sanatorial" type of care is not available, then convalescent care can be well carried out in a foster-home. This should be done under good medical and nursing supervision. When well organized, as in some States, this foster-home type of care for the cardiac child has proved to be most effective and is less costly. The child's own home may have to be utilized for convalescent care after his discharge from the acute hospital, and in many instances it is to be preferred to a foster-home. Here again, good medical and nursing supervision is necessary.

The Hospital Social Service has an important role to play in the continuity of care for the cardiac child. One very important item in the total care of these children is the preparation of the home for their continuing care after discharge from the convalescent home or the foster-home. It should be quite obvious that to return a child with rheumatic heart disease from an ideal environment to an overcrowded home with bad hygienic surroundings is to invite more trouble and to undo all the good which a long convalescence has done. This, then, is an important function of Social Service, and is a vital link in the life of these children. It should be remembered that most of them come from the lowest economic level and from homes of poverty and want attended by all the ills which follow in their wake. It is hoped that improved housing conditions in our large cities will lessen the incidence of this disease.

The cause of rheumatism is, as yet, not known, but many studies indicate that the streptococcus plays an important part in the genesis of the rheumatic state. The great majority of cases of rheumatic fever are preceded by an upper respiratory infection in which the predominant organism is some type of hemolytic streptococcus. This suggests that the streptococcus may act as a kind of detonator which sets off the unknown exciting agent and then rheumatic fever results. The same mechanism operates in the recurrences of the disease. This knowledge is important in the treatment, for these children should be protected against streptococcal infections. Rheumatic fever is most prevalent where these abound, as in the northern States, and is not so common in the South or tropics where the streptococcus is an infrequent visitor. Consequently, adequate and well managed convalescent care for the cardiac child implies a knowledge of these facts. When facilities are available it is suggested that specific streptococcus typing be done, and in group management to segregate children of specific types. Kuttner has demonstrated a mutation of different strains of streptococci from year to year.

The convalescent care of the young person with rheumatic fever implies not only an adequate and a

well supervised health program, but also a planned program in education, occupational therapy and vocational guidance. These latter should be an integral part of the total care, and we should think of this in terms of years rather than weeks or months. The long term care of the rheumatic state can be likened to the sanatorial care of tuberculosis. Both are chronic infections and in both the aim of treatment is to bring about an inactivation of the infectious process. A further analogy has been suggested by the word "streptococcosis," but this should not imply that the streptococcus is the cause of rheumatic fever. It may be likened rather to a catalyst in the genesis and acceleration of an obscure and not well understood process within the body tissues.

In the carrying out of this long term care of children with rheumatic heart disease, it is important to care for the psyche as well as the soma. The incorrect interpretation of cardiac murmurs and the labeling of young people as "cardiacs" should be a matter of much concern. Many of them grow up into adult life as cardiac neuroses. Because of the psychic maladjustment they are no use to themselves and become a burden to their family and to the community in which they live. It is all too easy to develop an invalid reaction in a growing child which in later years may be followed by feelings of insecurity, inferiority, and an anxiety state. Therefore, it is of the utmost importance to differentiate the organic murmur and the physiological murmur. The latter is fairly common in growing children, and often disappears before puberty.

In recapitulation, rheumatic fever is a disease of childhood, it has its beginning at about 6 or 7 years of age, it tends to recur following the initial infection, it is polymorphic in its manifestations, it is often insidious in its onset and unpredictable in its course. The heart is the organ which, by its involvement, does affect the ultimate prognosis. The severity of the repetitive attacks of rheumatic fever, causing increasing cardiac damage, is the chief feature controlling the immediate outlook.

Since rheumatic fever is not a reportable disease except in a few states we do not know how many people are suffering from it in this country. But it is estimated that there are about 200,000 children between the ages of 5 and 19 who have rheumatic heart disease, and a grand total of between 800,000 and 1,000,000 individuals afflicted. The total deaths each year are estimated to be about 40,000 and the average age of death 30 years. Besides the staggering number of deaths, rheumatic fever and rheumatic heart disease cause various degrees of physical incapacity in about 1% of the wage earning population. These figures speak for themselves and indicate that we have, in this country, an important public health problem.

Early diagnosis and a prolonged sanatorial type of treatment would salvage many of these lives and help to check the spread of the disease. Convalescence would then become a therapeutic approach to revalescence and a long step would be taken to bring rheumatic fever under control.

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